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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,109	12/12/2006	Ryo Aburatani	289571US0PCT	9363
22850	7590	06/12/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER TESKIN, FRED M	
			ART UNIT 1796	PAPER NUMBER
			NOTIFICATION DATE 06/12/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/575,109

**Applicant(s)**

ABURATANI ET AL.

**Examiner**

Fred M. Teskin

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 1 and 3-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/55/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

This Office action is responsive to application filed on 12 December 2006; claims 1-9 are currently pending and under examination.

Claims 1, 3 and 4-6 are objected to because of the following informalities: the presence of internal periods in each of said claims (see, e.g., claims 1 and 8, lines 6 and 8 of each and claims 3-5, line 3 of each). Appropriate correction is required.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 6 each provide the limitation to "the side chain crystallization" (in subparagraph (2)), which lacks clear precedent in the claims. Appropriate correction is required.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Minami et al is cited as pertinent to polymerizing 1-dodecene in the presence of a catalyst comprising (1,1'-dimethylsilylene)(2,2'-isopropylidene)bis(indenyl)zirconium dichloride (note Example 3). Subjecting the obtained polymer to an incorporation reaction of a polar compound or halogen compound is not shown nor suggested.

Claims 1-9 would be allowable if amended or rewritten to overcome the informality objection and the rejection under 35 U.S.C. 112 set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: Claims 1-9 are allowable over the closest prior art cited in the Search Report, as neither JP 8-504476 (equivalent of US 5567344 and US 5663129) nor WO 03/002659 (corresponding to US 7019080, cited herewith) teaches or adequately suggests subjecting to an incorporation reaction of a polar compound or halogen compound into a higher  $\alpha$ -olefin polymer satisfying the requirement (2) of the present invention. In regard to this requirement, the cited documents are silent as to presence of side chain crystallization in any of the  $\alpha$ -olefin polymers described therein. And while the catalysts used for polymerization in JP '476 and WO '659 may comprise metallocenes which are bis-cyclopentadienyl derivatives, the metallocene compounds disclosed are in every instance either unbridged or crosslinked with a single divalent bridging group (see, e.g., US '129 at col. 11, lines 35+ and US '080 at col. 4, line 30 to col. 6, line 50). By contrast, the higher  $\alpha$ -olefin polymer used in the present invention is prepared using a transition metal compound containing two divalent crosslinking groups (i.e., A1 and A2 in applicants' formula (I) at Specification page 10). Use of a transition metal compound having such a double crosslinked structure to prepare a higher  $\alpha$ -olefin polymer is nowhere proposed in the cited documents. Given the difference in transition metal compound used as catalyst for polymerizing a higher  $\alpha$ -olefin, no basis is seen to justify

an inference that the requirement (2) in claims 1 and 6 is inherently met by the  $\alpha$ -olefin polymers disclosed in the cited documents.

Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fred M Teskin/  
Primary Examiner, Art Unit 1796